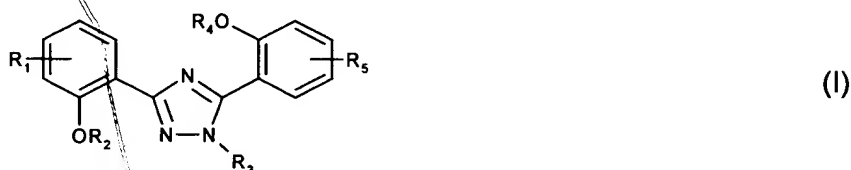


WHAT IS CLAIMED IS:

1. A method of treating diseases which cause an excess of metal in the human or animal body or are caused by it comprising administering to a subject in need of such treatment a therapeutically effective amount of a compound of formula I



in which

R_1 and R_5 simultaneously or independently of one another are hydrogen, halogen, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy, halo-lower alkoxy, carboxyl, carbamoyl, N-lower alkylcarbamoyl, N,N-di-lower alkylcarbamoyl or nitrile;

R_2 and R_4 simultaneously or independently of one another are hydrogen, unsubstituted or substituted lower alkanoyl or aroyl, or a protective group;

R_3 is hydrogen, lower alkyl, hydroxy-lower alkyl, halo-lower alkyl, carboxy-lower alkyl, lower alkoxy-carbonyl-lower alkyl, $R_6R_7N-C(O)$ -lower alkyl, unsubstituted or substituted aryl or aryl-lower alkyl, or unsubstituted or substituted heteroaryl or heteroaralkyl;

R_6 and R_7 simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl)amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring;

or a pharmaceutically acceptable salt thereof.

2. The method according to claim 1 wherein the metal is iron.

3. A pharmaceutical preparation comprising at least one compound of formula I according to claim 1, in which

proviso that R_3 is not phenyl, substituted by halogen, nitro, nitrile, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy or lower alkoxycarbonyl, if R_2 and R_4 are hydrogen and R_1 and R_5 are hydrogen, halogen, lower alkyl, halo-lower alkyl or lower alkoxy;

R_6 and R_7 simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl)amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring; or a salt thereof.

7. A compound of formula II according to claim 5, in which

R_1 and R_5 simultaneously or independently of one another are hydrogen, halogen or lower alkyl; R_2 and R_4 are hydrogen;

R_3 is $R_6R_7N-C(O)$ -lower alkyl, substituted aryl, substituted by carboxyl or $R_8R_9N-C(O)$ -, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkylamino or pyrrolidino, or unsubstituted or substituted heteroaralkyl;

R_6 and R_7 simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl)amino-lower alkyl or N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring;

R_8 and R_9 simultaneously or independently of one another are hydrogen or lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring; or a pharmaceutically acceptable salt thereof.

8. A compound selected from the group consisting of

{4-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]phenyl}-(4-methylpiperazin-1-yl)methanone;
{4-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]phenyl}morpholin-4-ylmethanone;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-1-(4-methylpiperazin-1-yl)ethanone;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-1-morpholin-4-yl-ethanone;

2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N,N-bis(2-hydroxyethyl)acetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N,N-dimethylacetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2,3-dihydroxypropyl)acetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-dimethylaminoethyl)-N-methylacetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-hydroxy-1-hydroxymethylethyl)acetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-hydroxyethyl)acetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-hydroxyethyl)-N-methylacetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-methoxyethyl)acetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-morpholin-4-yl-ethyl)acetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-[2-(2-hydroxyethoxy)ethyl]acetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-[2-(4-methylpiperazin-1-yl)ethyl]acetamide;
 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-methylacetamide;
 2-[3,5-bis(5-chloro-2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-morpholin-4-yl-ethyl)acetamide;
 3,5-bis(2-hydroxyphenyl)-1-(4-diethylaminobenzyl)-1H-[1,2,4]triazole;
 3,5-bis(2-hydroxyphenyl)-1-(4-pyrrolidin-1-ylbenzyl)-1H-[1,2,4]triazole;
 3,5-bis(2-hydroxyphenyl)-1-(pyridin-3-ylmethyl)-1H-[1,2,4]triazole;
 3,5-bis(2-hydroxyphenyl)-1-(pyridin-4-ylmethyl)-1H-[1,2,4]triazole;
 3,5-bis(5-chloro-2-hydroxyphenyl)-1-(4-dimethylaminobenzyl)-1H-[1,2,4]triazole;
 3,5-bis(5-chloro-2-hydroxyphenyl)-1-(pyridin-2-ylmethyl)-1H-[1,2,4]triazole;
 4-[3,5-bis(2-hydroxy-5-methylphenyl)-[1,2,4]triazol-1-yl]benzoic acid;
 4-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]benzoic acid;
 4-[3,5-bis(5-chloro-2-hydroxyphenyl)-[1,2,4]triazol-1-yl]benzoic acid;
 4-[3,5-bis(5-fluoro-2-hydroxyphenyl)-[1,2,4]triazol-1-yl]benzoic acid;
 N-{2-[bis(2-hydroxyethyl)amino]ethyl}-2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]acetamide;
 N-benzyl-2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-methylacetamide;
 or a pharmaceutically acceptable salt thereof.

9. A compound according to claim 8 which is 4-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]benzoic acid.

R₁ and R₅ simultaneously or independently of one another are hydrogen, halogen, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy, halo-lower alkoxy, carboxyl, carbamoyl, N-lower alkylcarbamoyl, N,N-di-lower alkylcarbamoyl or nitrile;

R₂ and R₄ simultaneously or independently of one another are hydrogen, unsubstituted or substituted lower alkanoyl or aroyl, or a protective group;

R₃ is hydrogen, lower alkyl, hydroxy-lower alkyl, halo-lower alkyl, carboxy-lower alkyl, lower alkoxy-carbonyl-lower alkyl, R₆R₇N-C(O)-lower alkyl, unsubstituted or substituted aryl, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkylamino or pyrrolidino, or unsubstituted or substituted heteroaryl or heteroaralkyl;

R₆ and R₇ simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl) amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring;

and salts thereof; and at least one pharmaceutically acceptable carrier.

4. A pharmaceutical preparation comprising at least one compound of formula I according to claim 1, in which

R₁ and R₅ simultaneously or independently of one another are hydrogen, halogen, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy or halo-lower alkoxy;

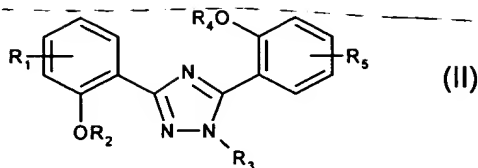
R₂ and R₄ simultaneously or independently of one another are hydrogen or a protective group;

R₃ is lower alkyl, hydroxy-lower alkyl, carboxy-lower alkyl, lower alkoxy-carbonyl-lower alkyl, R₆R₇N-C(O)-lower alkyl, substituted aryl, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkylamino or pyrrolidino, or unsubstituted or substituted heteroaryl or heteroaralkyl;

R₆ and R₇ simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl)amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring;

and salts thereof; and at least one pharmaceutically acceptable carrier.

5. A compound of formula II



in which

R₁ and R₅ simultaneously or independently of one another are hydrogen, halogen, lower-alkyl, halo-lower alkyl, lower alkoxy, halo-lower alkoxy, carboxyl, carbamoyl, N-lower alkylcarbamoyl, N,N-di-lower alkylcarbamoyl or nitrile;

R₂ and R₄ simultaneously or independently of one another are hydrogen, unsubstituted or substituted lower alkanoyl or aroyl, or a protective group;

R₃ is R₆R₇N-C(O)-lower alkyl, unsubstituted or substituted aryl, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkylamino or pyrrolidino, or unsubstituted or substituted heteroaryl or heteroaralkyl, with the proviso that

R₃ is not phenyl or phenyl substituted by halogen, nitro, nitrile, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy or lower alkoxycarbonyl if R₂ and R₄ are hydrogen, and R₁ and R₅ are hydrogen, halogen, lower alkyl, halo-lower alkyl, lower alkoxy or nitrile;

**R₆ and R₇ simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl)amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring;
or a salt thereof.**

6. A compound of formula II according to claim 5, in which

R₁ and R₅ simultaneously or independently of one another are hydrogen, halogen, lower alkyl, halo-lower alkyl, lower alkoxy or halo-lower alkoxy;

R_2 and R_4 simultaneously or independently of one another are hydrogen or a protective group;

R₃ is R₆R₇N-C(O)-lower alkyl, substituted aryl, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkyl amino or pyrrolidino, or unsubstituted or substituted heteroaralkyl with the

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overload comprising
effective amount of a

1. $\frac{1}{2}$ 2. $\frac{1}{3}$ 3. $\frac{1}{4}$ 4. $\frac{1}{5}$ 5. $\frac{1}{6}$ 6. $\frac{1}{7}$ 7. $\frac{1}{8}$ 8. $\frac{1}{9}$ 9. $\frac{1}{10}$ 10. $\frac{1}{11}$ 11. $\frac{1}{12}$ 12. $\frac{1}{13}$ 13. $\frac{1}{14}$ 14. $\frac{1}{15}$ 15. $\frac{1}{16}$ 16. $\frac{1}{17}$ 17. $\frac{1}{18}$ 18. $\frac{1}{19}$ 19. $\frac{1}{20}$ 20. $\frac{1}{21}$ 21. $\frac{1}{22}$ 22. $\frac{1}{23}$ 23. $\frac{1}{24}$ 24. $\frac{1}{25}$ 25. $\frac{1}{26}$ 26. $\frac{1}{27}$ 27. $\frac{1}{28}$ 28. $\frac{1}{29}$ 29. $\frac{1}{30}$ 30. $\frac{1}{31}$ 31. $\frac{1}{32}$ 32. $\frac{1}{33}$ 33. $\frac{1}{34}$ 34. $\frac{1}{35}$ 35. $\frac{1}{36}$ 36. $\frac{1}{37}$ 37. $\frac{1}{38}$ 38. $\frac{1}{39}$ 39. $\frac{1}{40}$ 40. $\frac{1}{41}$ 41. $\frac{1}{42}$ 42. $\frac{1}{43}$ 43. $\frac{1}{44}$ 44. $\frac{1}{45}$ 45. $\frac{1}{46}$ 46. $\frac{1}{47}$ 47. $\frac{1}{48}$ 48. $\frac{1}{49}$ 49. $\frac{1}{50}$ 50. $\frac{1}{51}$ 51. $\frac{1}{52}$ 52. $\frac{1}{53}$ 53. $\frac{1}{54}$ 54. $\frac{1}{55}$ 55. $\frac{1}{56}$ 56. $\frac{1}{57}$ 57. $\frac{1}{58}$ 58. $\frac{1}{59}$ 59. $\frac{1}{60}$ 60. $\frac{1}{61}$ 61. $\frac{1}{62}$ 62. $\frac{1}{63}$ 63. $\frac{1}{64}$ 64. $\frac{1}{65}$ 65. $\frac{1}{66}$ 66. $\frac{1}{67}$ 67. $\frac{1}{68}$ 68. $\frac{1}{69}$ 69. $\frac{1}{70}$ 70. $\frac{1}{71}$ 71. $\frac{1}{72}$ 72. $\frac{1}{73}$ 73. $\frac{1}{74}$ 74. $\frac{1}{75}$ 75. $\frac{1}{76}$ 76. $\frac{1}{77}$ 77. $\frac{1}{78}$ 78. $\frac{1}{79}$ 79. $\frac{1}{80}$ 80. $\frac{1}{81}$ 81. $\frac{1}{82}$ 82. $\frac{1}{83}$ 83. $\frac{1}{84}$ 84. $\frac{1}{85}$ 85. $\frac{1}{86}$ 86. $\frac{1}{87}$ 87. $\frac{1}{88}$ 88. $\frac{1}{89}$ 89. $\frac{1}{90}$ 90. $\frac{1}{91}$ 91. $\frac{1}{92}$ 92. $\frac{1}{93}$ 93. $\frac{1}{94}$ 94. $\frac{1}{95}$ 95. $\frac{1}{96}$ 96. $\frac{1}{97}$ 97. $\frac{1}{98}$ 98. $\frac{1}{99}$ 99. $\frac{1}{100}$ 100. $\frac{1}{101}$ 101. $\frac{1}{102}$ 102. $\frac{1}{103}$ 103. $\frac{1}{104}$ 104. $\frac{1}{105}$ 105. $\frac{1}{106}$ 106. $\frac{1}{107}$ 107. $\frac{1}{108}$ 108. $\frac{1}{109}$ 109. $\frac{1}{110}$ 110. $\frac{1}{111}$ 111. $\frac{1}{112}$ 112. $\frac{1}{113}$ 113. $\frac{1}{114}$ 114. $\frac{1}{115}$ 115. $\frac{1}{116}$ 116. $\frac{1}{117}$ 117. $\frac{1}{118}$ 118. $\frac{1}{119}$ 119. $\frac{1}{120}$ 120. $\frac{1}{121}$ 121. $\frac{1}{122}$ 122. $\frac{1}{123}$ 123. $\frac{1}{124}$ 124. $\frac{1}{125}$ 125. $\frac{1}{126}$ 126. $\frac{1}{127}$ 127. $\frac{1}{128}$ 128. $\frac{1}{129}$ 129. $\frac{1}{130}$ 130. $\frac{1}{131}$ 131. $\frac{1}{132}$ 132. $\frac{1}{133}$ 133. $\frac{1}{134}$ 134. $\frac{1}{135}$ 135. $\frac{1}{136}$ 136. $\frac{1}{137}$ 137. $\frac{1}{138}$ 138. $\frac{1}{139}$ 139. $\frac{1}{140}$ 140. $\frac{1}{141}$ 141. $\frac{1}{142}$ 142. $\frac{1}{143}$ 143. $\frac{1}{144}$ 144. $\frac{1}{145}$ 145. $\frac{1}{146}$ 146. $\frac{1}{147}$ 147. $\frac{1}{148}$ 148. $\frac{1}{149}$ 149. $\frac{1}{150}$ 150. $\frac{1}{151}$ 151. $\frac{1}{152}$ 152. $\frac{1}{153}$ 153. $\frac{1}{154}$ 154. $\frac{1}{155}$ 155. $\frac{1}{156}$ 156. $\frac{1}{157}$ 157. $\frac{1}{158}$ 158. $\frac{1}{159}$ 159. $\frac{1}{160}$ 160. $\frac{1}{161}$ 161. $\frac{1}{162}$ 162. $\frac{1}{163}$ 163. $\frac{1}{164}$ 164. $\frac{1}{165}$ 165. $\frac{1}{166}$ 166. $\frac{1}{167}$ 167. $\frac{1}{168}$ 168. $\frac{1}{169}$ 169. $\frac{1}{170}$ 170. $\frac{1}{171}$ 171. $\frac{1}{172}$ 172. $\frac{1}{173}$ 173. $\frac{1}{174}$ 174. $\frac{1}{175}$ 175. $\frac{1}{176}$ 176. $\frac{1}{177}$ 177. $\frac{1}{178}$ 178. $\frac{1}{179}$ 179. $\frac{1}{180}$ 180. $\frac{1}{181}$ 181. $\frac{1}{182}$ 182. $\frac{1}{183}$ 183. $\frac{1}{184}$ 184. $\frac{1}{185}$ 185. $\frac{1}{186}$ 186. $\frac{1}{187}$ 187. $\frac{1}{188}$ 188. $\frac{1}{189}$ 189. $\frac{1}{190}$ 190. $\frac{1}{191}$ 191. $\frac{1}{192}$ 192. $\frac{1}{193}$ 193. $\frac{1}{194}$ 194. $\frac{1}{195}$ 195. $\frac{1}{196}$ 196. $\frac{1}{197}$ 197. $\frac{1}{198}$ 198. $\frac{1}{199}$ 199. $\frac{1}{200}$ 200. $\frac{1}{201}$ 201. $\frac{1}{202}$ 202. $\frac{1}{203}$ 203. $\frac{1}{204}$ 204. $\frac{1}{205}$ 205. $\frac{1}{206}$ 206. $\frac{1}{207}$ 207. $\frac{1}{208}$ 208. $\frac{1}{209}$ 209. $\frac{1}{210}$ 210. $\frac{1}{211}$ 211. $\frac{1}{212}$ 212. $\frac{1}{213}$ 213. $\frac{1}{214}$ 214. $\frac{1}{215}$ 215. $\frac{1}{216}$ 216. $\frac{1}{217}$ 217. $\frac{1}{218}$ 218. $\frac{1}{219}$ 219. $\frac{1}{220}$ 220. $\frac{1}{221}$ 221. $\frac{1}{222}$ 222. $\frac{1}{223}$ 223. $\frac{1}{224}$ 224. $\frac{1}{225}$ 225. $\frac{1}{226}$ 226. $\frac{1}{227}$ 227. $\frac{1}{228}$ 228. $\frac{1}{229}$ 229. $\frac{1}{230}$ 230. $\frac{1}{231}$ 231. $\frac{1}{232}$ 232. $\frac{1}{233}$ 233. $\frac{1}{234}$ 234. $\frac{1}{235}$ 235. $\frac{1}{236}$ 236. $\frac{1}{237}$ 237. $\frac{1}{238}$ 238. $\frac{1}{239}$ 239. $\frac{1}{240}$ 240

